

Title (en)
TORQUE DETECTION DEVICE AND ELECTRIC POWER STEERING DEVICE

Title (de)
DREHMOMENTERKENNUNGSVORRICHTUNG UND SERVOLENKVORRICHTUNG

Title (fr)
DISPOSITIF DE DÉTECTION DE COUPLE ET DISPOSITIF DE DIRECTION ASSISTÉE

Publication
EP 2677292 B1 20150923 (EN)

Application
EP 12747158 A 20120130

Priority
• JP 2011029648 A 20110215
• JP 2011066927 A 20110325
• JP 2012051987 W 20120130

Abstract (en)
[origin: US2013282239A1] A torque detecting device and an electric power steering system are provided. A torque sensor includes a first rotor that is fixed to an input shaft and that has a predetermined shaft angle multiplier, and a second rotor that is fixed to an output shaft and that has a shaft angle multiplier different from that of the first rotor. In first to fourth output coils arranged on a stator that is arranged around outer peripheries of the first and second rotors, electric signals having different phases are generated on the basis of a variation of a gap between the stator and the first and second rotors. A twist angle of a torsion bar is calculated on the basis of the electric signals, and a torque that acts between the input shaft and the output shaft is calculated on the basis of the twist angle.

IPC 8 full level
G01L 3/10 (2006.01); **B62D 5/04** (2006.01)

CPC (source: EP US)
B62D 5/0463 (2013.01 - US); **B62D 5/049** (2013.01 - EP US); **B62D 6/10** (2013.01 - EP US); **G01L 3/105** (2013.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 2013282239 A1 20131024; US 8942890 B2 20150127; EP 2677292 A1 20131225; EP 2677292 A4 20150225; EP 2677292 B1 20150923; JP 2012185144 A 20120927; JP 5712724 B2 20150507; WO 2012111415 A1 20120823

DOCDB simple family (application)
US 201213979211 A 20120130; EP 12747158 A 20120130; JP 2011066927 A 20110325; JP 2012051987 W 20120130